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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/652,750	08/31/2000	Robert T. Baum	Bell-29	3522

7590

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EXAMINER

NGUYEN, PHUONGCHAU BA

ART UNIT

PAPER NUMBER

2665

DATE MAILED: 02/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/652,750	BAUM ET AL.	
	Examiner	Art Unit	
	Phuongchau Ba Nguyen	2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 1-2-2002 amendment.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections – 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1–13, 15–25, 28–31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gage (6,035,405) in view of Allan (5,946,313).

Regarding claims 1, 5:

Gage (6,035,405) discloses determining whether or not the packet is entitled to access a particular service using at least a portion of the unique bit string; and if it is determined that the packet is entitled to access the particular service, then routing the packet {col.1, lines 54–61, wherein a membership in VLAN can be defined by a unique 48 bit MAC address (OUI) which constitutes elements of the VLAN and the source of MAC address is used for determining the VLAN where the end station belongs}.

Gage does not explicitly disclose the unique bit string is independent from layer 2 destination address (MAC destination). However, in the same field of endeavor, Allan (5,946,313) discloses a method for provisioning services to packets sourced from a number of client devices, each of the packets having at least a part of a layer 2 header (MAC address, DA 28 or SA 30, fig.2) replaced (inserted) with a unique bit string (unique MAC OUI) that is independent of a layer 2 destination address 28 (as the unique MAC OUI is in SA 42) {col.7, lines 12–20; col.8, lines 56–58}. Therefore, it would have been obvious to an artisan to apply Allan's teaching of OUI at MAC source into Gage's system and the motivation being to inform the network LAN 25 that a source (incoming packet) is registered or not {col.7, lines 16–20, Allan}.

Regarding claims 9, 15:

Gage further discloses broadcast and multicast traffic transmitting to only end-stations that are members of the VLAN {col.1, lines 27–30}. Thus by broadcasting and multicasting Gage inherently copy the packet to generate a

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duplicate packet, and forwarding the duplicate packet to a monitoring facility (end stations).

Regarding claims 2, 6, and 10:

Gage further discloses wherein at least a portion of the unique bit string represents one of a number of logical interface {col.1, lines 43 & 56–58}

Regarding claims 3, 7, and 11:

Gage discloses unique MAC address of 48-bit {col.1, lines 54–56} and Allan further discloses wherein at least a portion of the unique bit string corresponds to a virtual private network–organizational universal identifier {source MAC (OUI field 42), fig.6a}. Therefore, it would have been obvious to an artisan to apply Allan’s teaching of OUI at MAC source into Gage’s system and the motivation being to inform the network LAN 25 that a source (incoming packet) is registered or not {col.7, lines 16–20, Allan}.

Regarding claims 4, 8, and 12:

Gage discloses unique MAC address of 48-bit {col.1, lines 54–56} and Allan further discloses wherein at least a portion of the unique bit string corresponds to a virtual private network–INDEX {source MAC (ID field 44), figs.1c, 3a–b, and 6a}. Therefore, it would have been obvious to an artisan to apply Allan’s teaching of ID at MAC source into Gage’s system and the motivation being to identify the protocol of the frame

Regarding claims 13 and 31:

Gage discloses an access control list (membership) and its contents (user name, access port identifier, end station MAC address, confidential information circulating within the VLAN) in for determining entitlement to access a particular service (e.g., confidential information circulating within the VLAN; col.1, lines 51–53; claim 31). Gage further discloses an access controller (network administrator {col.1, 56–61, 701 in fig.2}).

Regarding claims 16, 18, 21, 24, and 29:

Gage does not explicitly disclose the claimed features. And Allan further discloses wherein the layer 2 header is an Ethernet header (fig.1 c), wherein when the unique bit string replaces the at least a part of the layer 2 header a modified header is generated, and wherein a bit-size of the modified header is the same as that of the Ethernet header {Allan, col.6, lines 61–64}. Therefore, it would have been obvious to an artisan to apply Allan's teaching of Ethernet header with OUI at MAC source into Gage's layer 2 header and the motivation being to show the structure of the frame format of Ethernet header (layer 2 header) in the Ethernet network (i.e., VLAN network in Gage).

Regarding claims 17, 19, 25, and 30:

Gage further discloses wherein at least a portion of the unique bit string represents a logical port identifier {col.1, lines 43} including a geographic location identifier and a physical unit identifier {col.1, lines 45–48, 56–61}.

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Regarding claims 20, 28:

Gage does not explicitly disclose the claimed features. And Allan further discloses wherein the unique bit string is independent of a layer 2 destination address {OUI field 42 in figs. 1c, 3a-3b, 6a}. Therefore, it would have been obvious to an artisan to apply Allan's teaching of OUI at MAC source into Gage's system and the motivation being to inform the network LAN 25 that a source (incoming packet) is registered or not {col. 7, lines 16-20, Allan}.

3. Claims 14, 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gage (6,035,405) in view of Allan (5,946,313) as applied to claims 1-12 & 15, and further in view Haddock (6,104,700).

Regarding claim 14:

Gage and Allan do not explicitly disclose fails to teach the determination of a service level of a packet based on a portion of at least one of layer 3 address or the unique bit string (layer 2 address) of the packet and forwarding the packet to the queue associated with the determined service level.

However, in the same field of endeavor, Haddock teaches such determination. Specifically, Haddock teaches a forwarding device (could be a switch or a router) which determines the quality of service QoS level (a service level) of an incoming packet based on either its IP address (layer 3 address) or MAC address (layer 2 address). See col. 5, lines 31–49. Once the determination is made, the packet is forwarded to a QoS queue associated with the determined QoS level. See figure 2. This mechanism ensures quality of service for various QoS levels, thereby enhancing system performance. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply Haddock's teaching of determining a service level of a packet based on either IP address (layer 3 address) or MAC address (unique bit string) of the packet and forwarding the packet to the queue associated with the determined service level in Gage's system and the motivation being to provide quality of service for various QoS levels and enhance system performance.

Regarding claim 26:

Gage does not explicitly disclose the claimed features. And Allan further discloses wherein the layer 2 header is an Ethernet header (fig.1c), wherein when the unique bit string replaces the at least a part of the layer 2 header a modified header is generated, and wherein a bit-size of the modified header is the same as that of the Ethernet header. Therefore, it would have been obvious to an artisan to apply Allan's teaching of Ethernet header with OUI at MAC source into Gage's system and the motivation being to show the structure of the frame format of Ethernet frame (layer 2 header) in the Ethernet (VLAN) network.

Regarding claim 27:

Gage further discloses wherein at least a portion of the unique bit string represents a logical port identifier {col.1, lines 43} including a geographic location identifier and a physical unit identifier {col.1, lines 45-48, 56-61}.

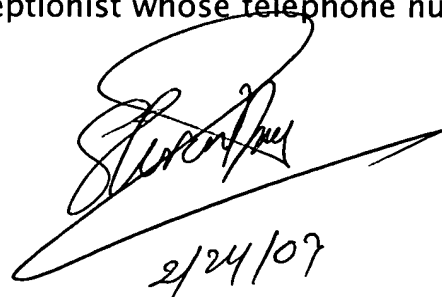
Response to Arguments

4. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuongchau Ba Nguyen whose telephone number is 703-305-0093. The examiner can normally be reached on Monday-Friday from 10:00 a.m. to 3:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on 703-308-6602. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.



Handwritten signature and date: 2/24/07

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PN

Phuongchau Ba Nguyen

Examiner

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February 24, 2003
